

REMARKS

The drawings are objected to, because the Examiner believes that FIG. 3 should be labeled as prior art. Applicants concurrently file herewith a Request for Approval of Proposed Drawing Corrections, which includes the Examiner's suggested change to FIG. 3.

Also, the drawings are objected to because the Examiner alleges that the batteries recited in claim 1 are not shown in the drawings. Applicants respectfully disagree with the Examiner, because the batteries 4 are shown in FIG. 2. The discussion of the batteries 4 is included in the description of FIG. 3, beginning on page 1 of the specification, since the batteries 4 are common to FIGS. 2 and 3.

The title of the invention is amended in response to the Examiner's objection thereto.

Claims 1-4 are all the claims pending in the application.

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over DeBiasi et al. (US 5,481,176) in view of ordinary skill in the art. Applicants respectfully traverse the rejection as set forth below.

Independent claim 1 of the present invention requires that the "current detecting resistor is a thick film printed resistor" and that "each of said means other than said thick film printed resistor is an electronic circuit and the electronic circuits are configured in the form of an integrated circuit." Applicants submit that DeBiasi et al. do not teach or suggest these limitations of the claim.

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In particular, DeBiasi et al. fail to disclose a field current detecting resistor that is a thick film printed resistor. Apparently, the Examiner considers the resistor 46, shown in FIG. 2 of DeBiasi et al., to correspond to Applicants' field current detecting resistor. However, nothing in DeBiasi et al. even suggests that the resistor 46, or any other disclosed resistor, is a thick film printed resistor.

The Examiner admits that the reference does not disclose this limitation of the claim, but did not give this limitation patentable weight due to the method-like structure of the "formed as" language in the claim. Although the wording in the claim is clearly intended reflect the structural aspect of the field current detecting resistor being a thick film printed resistor, Applicants amend this limitation of the claim. This amendment is believed to be a non-narrowing amendment to the claim, since it deletes some of the claim language.

Furthermore, DeBiasi et al. do not disclose the integrated circuit of Applicants' claim 1. The Examiner cites the engine controller 18 as corresponding to the claimed integrated circuit. However, the engine controller 18 is simply an engine controller (see col. 2, lines 29-40). On the other hand, each of the voltage regulating means and the field current restricting means of claim 1 are electronic circuits that make up the integrated circuit. Thus, even if the engine controller 18 is an integrated circuit, it does not correspond to Applicants' claimed integrated circuit.

Therefore, claim 1 and its dependent claims 2-4 are believed to be allowable over the prior art, at least because DeBiasi et al. fail to teach or suggest all of the limitations of claim 1.

Regarding claim 4, the Examiner did not give any patentable weight to the limitations of this claim, due to the Examiner's interpretation of the claim language as being method-like.


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Claim 4 is amended in a non-narrowing manner by deleting the phrase "provided in the form of." Applicants submit that DeBiasi et al. do not teach or suggest the limitations of claim 4. Instead, DeBiasi et al. disclose a warning lamp 25, which indicates when a fault occurs in the charging system. Col. 3, lines 11-17. Clearly, the warning lamp does not correspond to an integrated circuit failure alarm means. Thus, claim 4 is believed to be allowable for this additional reason.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE TITLE:

The title is changed as follows:

INTEGRATED CIRCUIT CONTROLLER FOR VEHICLE A.C. GENERATOR [FOR
VEHICLE]

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended) A controller for an A.C. generator for a vehicle, comprising:

batteries each of which is charged with electric charges on the basis of an output of
generation of electrical energy of an A.C. generator having a field coil;

voltage regulating means for regulating a current, which is caused to flow through said
field coil, on the basis of the detection result of a voltage developed across the terminals of said
batteries due to an output voltage of said A.C. generator into a[n] fixed output value of the
generation of electrical energy of said A.C. generator; and

field current restricting means for detecting a current which is caused to flow through
said field coil by means of a field current detecting resistor to restrict the current to a
predetermined value in correspondence to the detection result,

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wherein said field current detecting resistor is [formed as] a thick film printed resistor,
and

wherein each of said means other than said thick film printed resistor is [formed as] an
electronic circuit and the electronic circuits are configured in the form of an integrated circuit.

4. (Amended) A controller for an A.C. generator for a vehicle according to claim 1,
[wherein] further comprising a failure alarm means for detecting a failure of said A.C. generator
to give an alarm, wherein the failure alarm means is [provided in the form of] an integrated
circuit.